

ALASKA PENINSULA-ALEUTIAN ISLANDS MANAGEMENT AREA
FOOD AND BAIT HERRING MANAGEMENT PLAN, 2003



By

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ABSTRACT

The food and bait herring fishery in the Alaska Peninsula-Aleutian Islands Herring Management Area can take place within the Unimak, Akutan, Unalaska, Umnak, and Adak Districts. This document describes how the fishery will be managed, the requirements of industry to participate in the fishery, and how to contact and relay information to the department. Historical harvests for the Dutch Harbor fishery as well as the 2003 season guideline harvest levels and harvest projections are presented. This document is intended as a guide for commercial herring fishers, buyers, and tenders. Information regarding commercial herring openings should be obtained from the department prior to fishing.

INTRODUCTION

This document is intended to provide commercial herring fishers and buyers with management information and guidelines for participating in the Alaska Peninsula-Aleutian Islands Management Area food and bait herring fishery. This fishery is commonly referred to as the Dutch Harbor food and bait herring fishery.

The Alaska Peninsula-Aleutian Islands Herring Management Area consists of Bering Sea state waters extending west of Cape Menshikof and Pacific Ocean state waters extending west of Kupreanof Point to the International Dateline (Figure 1). In 1991, the Alaska Board of Fisheries (BOF) enacted regulations that allow food and bait herring fishing only in the eastern Aleutian Islands portion of the Alaska Peninsula-Aleutian Islands Management Area. Consequently, the Dutch Harbor food and bait herring fishery may take place only in eastern Aleutian Islands waters within the Unimak, Akutan, Unalaska, Umnak, and Adak Districts (Figure 2).

The Alaska Department of Fish and Game (ADF&G) and the Alaska Department of Public Safety use global positioning system (GPS) technology to identify districts, sections, closed waters, and regulatory fishing coordinates published in regulations or emergency orders. Fishers may need to verify the latitude and longitude of their fishing sites using GPS technology and confirm their location in regards to regulatory boundaries, lines, and coordinates. It is not either agency's intent to displace fishing in traditional sites or change fishing areas. Any fisherman who believes they are being affected by the use of GPS should contact ADF&G offices in Port Moller, Sand Point, or Cold Bay immediately. Emergency order authority may be used to accommodate traditional fishing activities.

In 2001, the BOF established a herring gillnet fishery to allow gillnet fishers a practical opportunity to harvest herring from the Dutch Harbor allocation given the short (usually less than one hour) open periods required to manage the purse seine fishery. The gillnet fishery was allocated 7% of the total Dutch Harbor herring food and bait allocation (5 AAC 27.655).

The Dutch Harbor food and bait herring fishery began in 1929 (Rounsefell 1930) and occurred annually through 1938. Harvests averaged 1,474 tons and ranged from 513 tons to 2,510 tons (Table 1). No fishing occurred from 1939-1944 or from 1946-1980. From 1981-2002, catches ranged from 704 tons to 3,578 tons. From 1982-1991, an average of eight vessels participated in the Dutch Harbor food and bait herring fishery. Since 1991, an average of 19 purse seine vessels have participated in this fishery. Effort has increased to an average of 22 purse seine vessels since 1996. From 1993-2002, the duration of the purse seine fishery has averaged seven days, with the 2002 fishery allocation being harvested by 16 vessels during one twenty-minute competitive fishing period (Table 2). In 2002, 13 gillnet vessels harvested their quota over 12 days. (Ford et al. *in press*). In recent years, all harvests have been in Unalaska Bay in the Unalaska District (Figures 3 and 4).

The ADF&G will manage this fishery according to the Bering Sea Herring Fishery Management Plan (5 AAC 27.060; ADF&G 2001). The following ADF&G local offices can be contacted for information concerning the Dutch Harbor food and bait herring fishery:

Sand Point:

Alaska Department of Fish and Game
P.O. Box 129
Sand Point, AK 99661

Phone: (907) 383-2066
Fax: (907) 581-1572
Record: (907) 383-2334

VHF 6 & 73
Single Side Band 3.230 MHz
KWB 362

Dutch Harbor

Alaska Department of Fish and Game
P.O. Box 920587
Dutch Harbor, AK 99692

Phone: (907) 581-1239
Fax: (907) 581-1572

VHF 9
Single Side Band 4.125 MHz
WIM 76

MANAGEMENT PLAN***Registration Requirements for Fishing Vessels, Tenders, and Processors***

Each fishing vessel, tender operator, and buyer must register at the ADF&G office in Dutch Harbor or at the purse seine pre-fishery meeting in Dutch Harbor prior to catching, tendering, buying, or processing herring. The purse seine pre-fishery meeting is tentatively scheduled for July 14 at 5:00 PM. The actual time and location will be announced and distributed to processors in late June or early July. The buyer and tender reporting requirements are located in Appendix A. Permit holders are encouraged to check with their markets prior to fishing to determine which products are acceptable.

Fishing Periods for Gillnet Vessels

The gillnet herring fishery can open by emergency order beginning 12:00 NOON June 24 and can extend through 12:00 NOON July 15, when the purse seine fishery may open. The department may establish open periods by emergency order based on industry interest in conducting the fishery. The department will consider effort levels and harvest rates when establishing area restrictions for gillnet fishers and open areas may include waters outside of Unalaska Bay.

Fishing Periods for Purse Seine Vessels

The initial purse seine herring fishing period may occur as early as 12:00 NOON on July 15 provided that the department is able to survey the area and sufficient herring biomass is available. If the guideline harvest level (GHL) is below 150 tons per registered vessel present, the department will not allow a competitive fishery.

In 2002, the average harvest per registered purse seine vessel was 167 tons and the GHL was exceeded. In order to minimize the possibility of exceeding the GHL in 2003, if the GHL is less

than 150 tons per vessel, a competitive commercial opening will not be allowed. For any commercial purse seine harvest to occur, fishers, processors, and the department must agree to a cooperative fishing plan. To gain the department's approval, the plan must control harvest rates enough to minimize the probability that the GHF will be exceeded.

If a competitive fishery occurs, a catch report from each Commercial Fisheries Entry Commission (CFEC) permit holder or tender operator that reflects each vessel's harvest will be required after each fishing period, whether or not herring are harvested, before the next fishing period will be announced. Generally, there will be a 12-hour closure between fishing periods to allow permit holders the opportunity to deliver their catch and the ADF&G time to assess the harvest. A shorter closed period may be allowed if the department promptly receives harvest reports reflecting the harvest of all vessels participating.

Gillnet Catch Reporting

Gillnet permit holders wishing to harvest herring must register with ADF&G personnel in Dutch Harbor prior to fishing. Even if no herring are harvested or vessels are not actively fishing, permit holders and processors will be required to report herring harvest daily or until registration from the fishery is withdrawn. Permit holders and processors will be required to contact the ADF&G in Dutch Harbor upon harvest or delivery of herring. If conditions arise which require additional time for permit holders to report gillnet herring harvests, the department should be informed of the situation prior to fishing operations. Catch reporting instructions will be explained in detail during vessel and processor registration.

Purse Seine Catch Reporting

Permit holders, tender operators, and processors must provide accurate catch information after each fishing period. Tender operators must provide accurate estimates of herring onboard the tender. Processors must provide accurate estimates of delivered herring.

Inseason emergency orders will be broadcast on VHF channel 12. VHF channel 12 will be the designated department channel for conducting herring fishing communications during the fishery. Fishers, tenders and processors should monitor this channel.

Fish Tickets

Permit holders must provide specific harvest locations (statistical area and specific landmark) to buyers, so that they can be recorded on fish tickets. Fish tickets must be delivered, by mail or in person, to the Sand Point ADF&G office within ten days after the closure of the fishery or delivered in person immediately following the fishery to the Dutch Harbor ADF&G office. If ten days is insufficient time to submit fish tickets, other arrangements may be made by contacting the ADF&G in Sand Point.

Gillnet and Seine Specifications

During the food and bait herring season, gillnets may not exceed 150 fathoms in length and must have a stretch mesh measurement from 2 1/8" to 3" with no depth restrictions. Gillnet permit holders wishing to use 2 1/2" to 3" mesh will be required to obtain a permit from the ADF&G office in Sand Point or Dutch Harbor prior to fishing as specified in 5 AAC 27.631(d). Purse seines are restricted to a maximum of 250 fathoms in length with no depth restrictions (5 AAC 27.632).

Gear Testing

Prior to the opening of the fishery, herring purse seine gear may be tested during daylight hours until 10:00 PM July 14. Gear testing will only be allowed between Hog Island and Amaknak Island in view of the ADF&G Dutch Harbor office or within one-half mile of the Delta-Western Fuel Dock in Dutch Harbor. Permit holders must contact an ADF&G representative in Dutch Harbor on VHF channel 12 or in person prior to setting and must designate a specific set location and time. In addition, any fish caught during gear testing must be released immediately unharmed. After the fishery has been closed and all herring on the vessel have been offloaded, participants may set their net to straighten, clean, and organize their gear in the designated area, after notifying the department.

Commercial Harvest Sampling

Cooperation by fishers, tender operators, and processors will be appreciated when ADF&G personnel request herring samples from the commercial catch. These samples will be used to monitor age composition.

Test Fishing

The department will conduct a test fishery in 2003. The test fishery will provide the department with valuable stock assessment information prior to commercial herring fishing periods. In addition, the test fish program will provide age, weight, and length samples of herring present in the Dutch Harbor area, and help pay for the associated costs of analyzing data and managing the fishery. The department will advertise for test fish vessels in June and early July.

Requirements and Harvest Projection for the 2003 Fishery

The department shall attempt to manage the Dutch Harbor food and bait herring fishery so that the harvest remains within the allocated 7% of the remaining allowable Togiak District sac roe herring harvest as determined under the provisions of the Bristol Bay Herring Management Plan (5 AAC 27.865). In order for the Dutch Harbor food and bait herring fishery to occur, each respective Western Alaska herring stock must surpass its respective BOF mandated spawning biomass threshold. Currently, the biomass of all stocks are forecast above their respective threshold levels. Therefore, the outlook for a 2003 Dutch Harbor food and bait fishery is favorable. However, processors and fishers are advised that management of the 2003 fishery will be based

on the observed spawning biomass of each Bering Sea herring stock in 2003. The ADF&G will update biomass estimates for each stock as herring move into coastal waters during spawning migrations. The projected harvest allocation for the 2003 Dutch Harbor food and bait herring fishery is 489 tons after the excess harvest (rollover) from the 2002 fishery is deducted. (Appendix B; West 2002). This allocation is derived using the Bering Sea Herring Management Plan (5 AAC 27.060) and the preseason projected 2003 Togiak herring spawning biomass of 126,213 tons. The actual allocation will be established when the 2003 Togiak District herring spawning biomass is determined.

As established during the 2001 BOF meeting, the Dutch Harbor food and bait allocation established under 5 AAC 27.865(b)(7) shall be divided between gear groups, 93% to the seine fishery and 7% to the gillnet fishery. These allocations are considered independent of each other so that one gear group may not harvest herring allocated to the other gear group. The “rollover” provision (see below) dictates that the overage from the 2002 fishery of 24 tons for the gillnetters and 1,149 tons for the purse seiners be subtracted from the 2003 allocation. For the 2003 season, this results in projected harvest allocations of 92 tons for the gillnet fishery and 397 tons for the purse seine fishery (Appendix B).

A “rollover” provision was adopted during the 2001 BOF meeting, as an incentive to encourage the department to conduct a fishery that stays within the herring harvest allocation. During years when herring harvest surpasses the allocation, the amount of additional harvest shall be deducted from the next year’s allocation by gear group. If necessary, any “rollover” herring from the 2003 season will be deducted from the allocation for the 2004 season.

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- ADF&G (Alaska Department of Fish and Game). 2001. 2001-2003 Commercial herring fishing regulations, 2001 edition. Alaska Department of Fish and Game, Commercial Fisheries Division, Juneau.
- Ford, M.T., C. Burkey, Jr., and R.L. Murphy. *In press*. Alaska Peninsula and Aleutian Islands Management Area Herring Sac Roe and Food and Bait Fisheries Annual Management Report, 2002. Alaska Department of Fish and Game, Commercial Fisheries Division, Regional Informational Report 4K03-11, Kodiak.
- Rounsefell, G.A. 1930. Contribution to the biology of the Pacific herring, *Clupea pallasii*, and the condition of the fishery in Alaska. Bull. U.S. Bur. Fish. 45. 227-320.
- West, F. 2002. Commercial herring fishing news release, December 19, 2002. Alaska Department of Fish and Game, Commercial Fisheries Division, Anchorage.

Table 1. Alaska Peninsula-Aleutian Islands Area Dutch Harbor food and bait herring fisheries historical summary, 1929-2002.

Year	Harvest in Short Tons	Number of Vessels Making Landings	Number Landings	Tons Per Boat	Tons Per Landing	Price Per Ton	Exvessel Value (Thousands)	Exvessel Value Per Vessel (Thousands)
1929	1,259					Information not Available		
1930	1,916					Information not Available		
1931	1,056	26				Information not Available		
1932	2,510	30				Information not Available		
1933	1,585	38				Information not Available		
1934	1,533					Information not Available		
1935	2,412					Information not Available		
1936	1,379					Information not Available		
1937	579					Information not Available		
1938	513					Information not Available		
1939-44	No Fishery							
1945	75					Information not Available		
1946-80	No Fishery							
1981	704	a	a	a	a	a	a	a
1982	3,565	7	95	509	38	300	1,020	146
1983	3,567	8	96	446	37	232	828	104
1984	3,578	9	61	398	59	210	751	83
1985	3,480	6	78	560	45	162	564	94
1986	2,394	7	53	342	45	254	600	86
1987 ^b	2,503	8	45	373	56	300	751	94
1988 ^b	2,004	8	59	251	34	252	505	63
1989 ^b	3,081	9	69	342	45	283	873	97
1990	820	7	8	117	103	350	287	41
1991	1,325	8	18	166	74	300	398	50
1992	1,949	11	26	177	75	300	573	52
1993	2,790	13	32	215	87	300	837	64
1994	3,349	14	65	239	52	300	1,005	72
1995	1,748	14	24	125	73	300	524	37
1996	2,239	24	29	93	77	300	672	28
1997	1,950	26	63	75	31	300	585	23
1998	1,994	22	22	91	91	300	598	27
1999	2,398	21	71	109	34	400-600	1,038	49
2000	2,014	20	28	88	72	300-500	671	34
2001 ^b	1,439	20	30	95	48	300-500	406	20
2002 ^b	2,751	21	51	133	55	300-450	1,119	53
1929-1938 Average	1,474					Information not Available		
1993-2002 Average	2,267	20	42	126	62	300	745	41

^a This information cannot be released due to state confidentiality requirements.

^b Includes gillnet and seine gear, otherwise only purse seine gear from 1981-2000.

Table 2. Alaska Peninsula-Aleutian Islands Area Dutch Harbor commercial food and bait herring fishery, including landing date, days fished, preseason Togiak spawning biomass, guideline harvest level, harvest, and number of vessels fishing, 1981-2002.

Year	Landing Date		Days fished	Preseason Togiak Spawning Biomass	GHLs Short Tons	Food & Bait Harvest Short Tons	% Togiak Spawning Biomass Harvested	Number Vessels Fishing
	First	Last		Short Tons	Tons	Tons	Harvested	
1981	Aug 3	Aug 23	21	159,000	None	704	0.4	^a
1982	Aug 5	Sep 12	39	98,000	None	3,565	3.6	7
1983	Jul 23	Sep 6	46	142,000	3,525 ^b	3,567	2.5	8
1984	Jul 17	Jul 27	11	115,000	3,525 ^b	3,578	3.1	9
1985	Jul 17	Aug 11	26	132,000	3,525 ^b	3,480	2.6	6
1986	Jul 16	Jul 28	13	96,000	2,453	2,394	2.5	7
1987	Jul 16	Jul 23	4	88,000	2,332 ^c	2,503	2.8	9 ^c
1988	Jul 16	Sep 18	21	132,000	3,100 ^c	2,004	1.5	8 ^c
1989	Jul 16	Aug 5	19	100,108	3,100 ^c	3,081	3.1	9 ^c
1990	Aug 15	Aug 15	<1	72,000	903	820	1.1	7
1991	Jul 17	Jul 17	<1	83,229	931	1,325	1.6	8
1992	Jul 16	Jul 28	5	60,214	1,940	1,949	3.2	11
1993	Jul 16	Jul 16	<1	164,135	2,193	2,790	1.7	13
1994	Jul 16	Jul 19	4	165,747	2,215	3,349	2.0	16
1995	Jul 16	Jul 16	<1	149,093	1,982	1,748	1.2	18
1996	Jul 16	Jul 16	<1	135,585	1,793	2,239	1.7	25
1997	Jul 15	Jul 19	5	125,000	1,645	1,950	1.6	26
1998	Jul 16	Jul 16	<1	121,054	1,590	1,994	1.6	22
1999	Jul 16	Jul 20	4	156,200	2,082	2,398	1.5	22
2000	Jul 15	Jul 15	<1	130,904	1,728	2,014	1.5	23
2001								
Gillnet	Jun 25	Jul 11	9	119,818	110	107	0.1	6
Seine	Jul 15	Jul 16	2	119,818	1,462	1,332	1.1	14
2001 Total	Jun 25	Jul 16	11	119,818	1,572	1,439	1.2	20
2002								
Gillnet	Jul 5	Jul 17	12	120,196	110	134	0.1	13
Seine	Jul 15	Jul 15	<1	120,196	1,468	2,617	2.2	16
2002 Total	Jul 5	Jul 17	12	120,196	1,578	2,751	2.3	29
1993-2002 Average			7	138,773	1,838	2,267	1.6	21

^a Number may not be released due to state confidentiality requirements.

^b Harvest ceiling of 3,525 established by Alaska Board of Fisheries.

^c Purse seine gear only used to harvest herring from 1981-2000 except that deliveries were made by one gillnet vessel in 1987 and 1988 and two gillnet vessels in 1989.

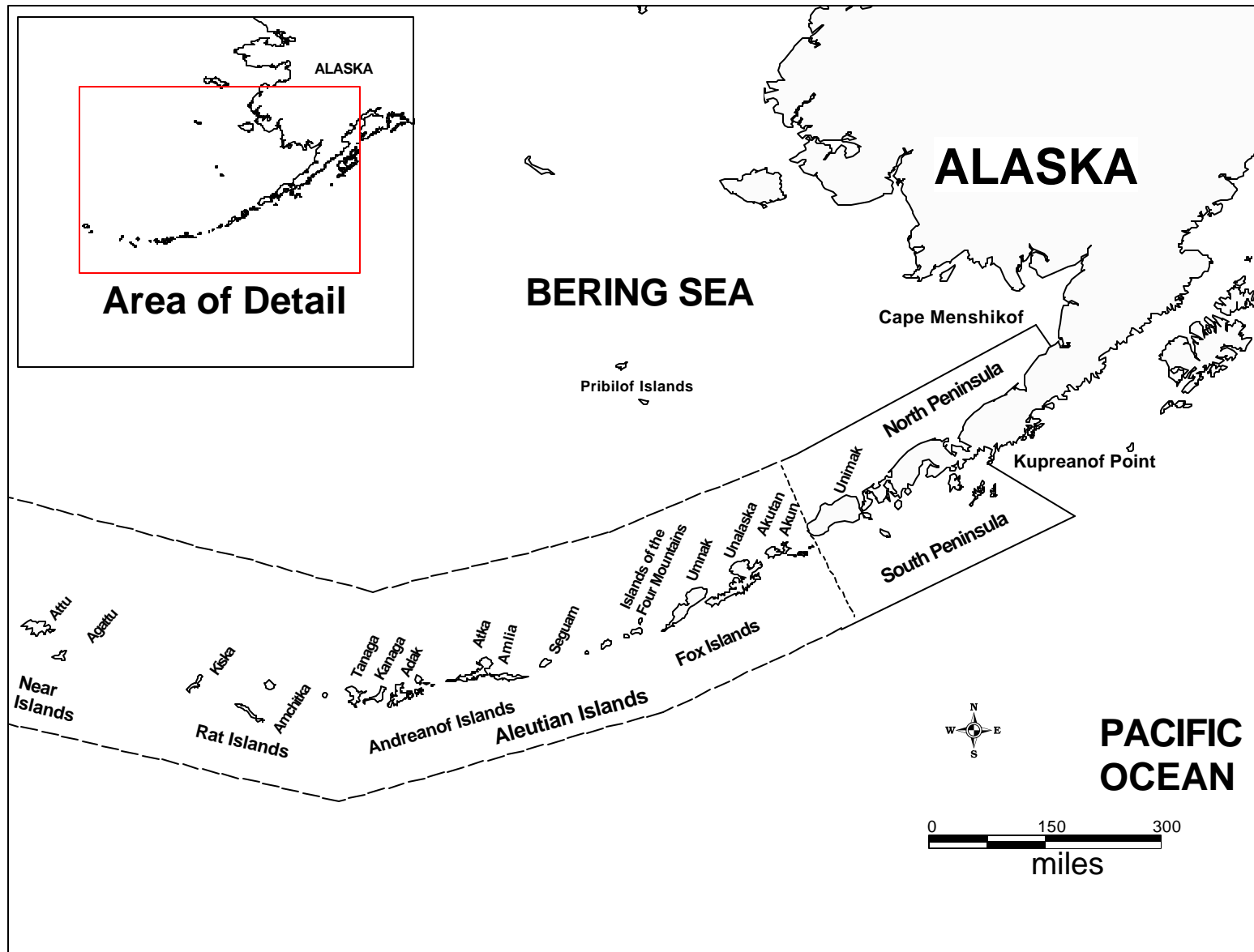


Figure 1. Map of the Alaska Peninsula and Aleutian Islands Herring Management Area.

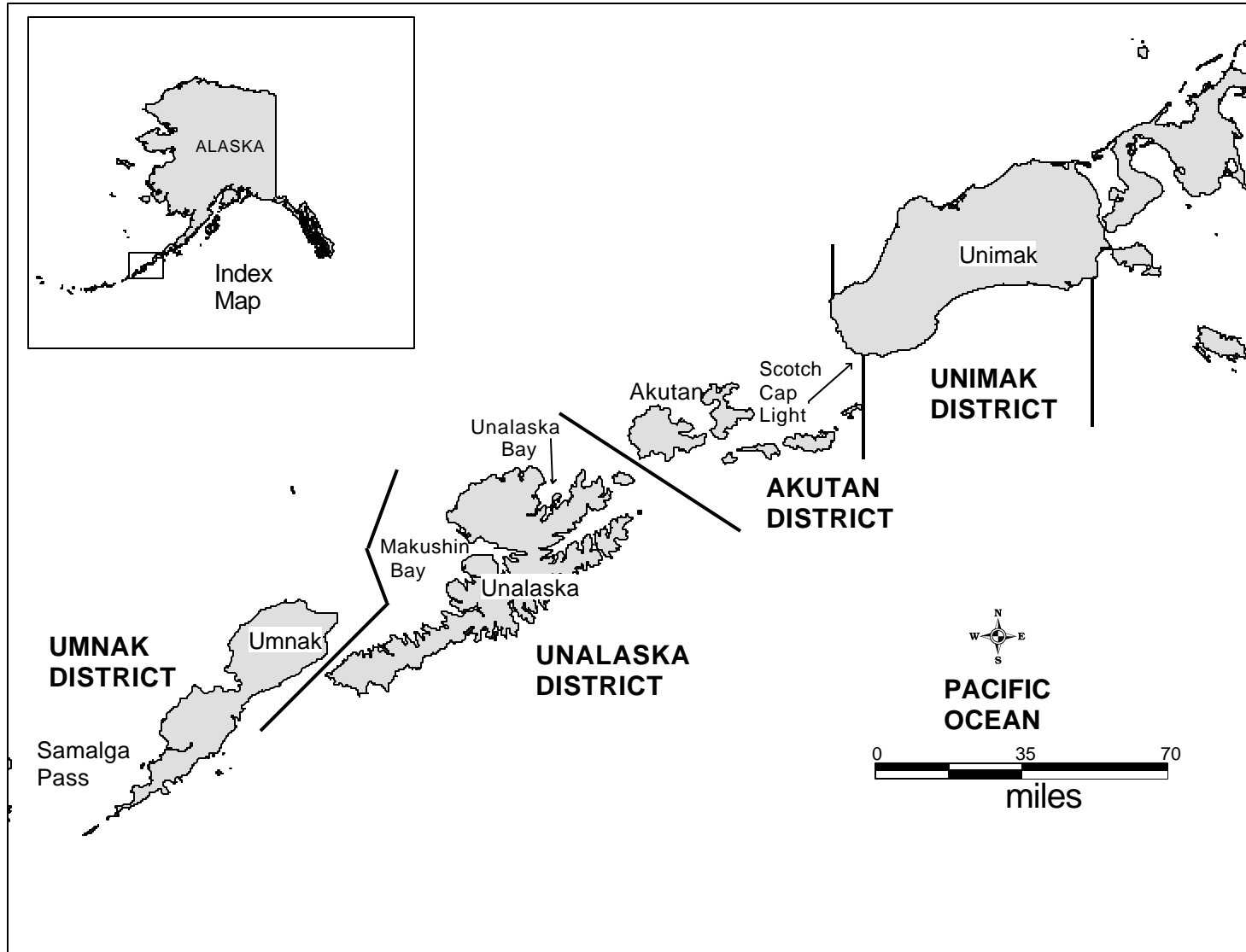


Figure 2. Map of the eastern Aleutian Islands from Samalga Pass to Unimak Island with herring fishing districts shown.

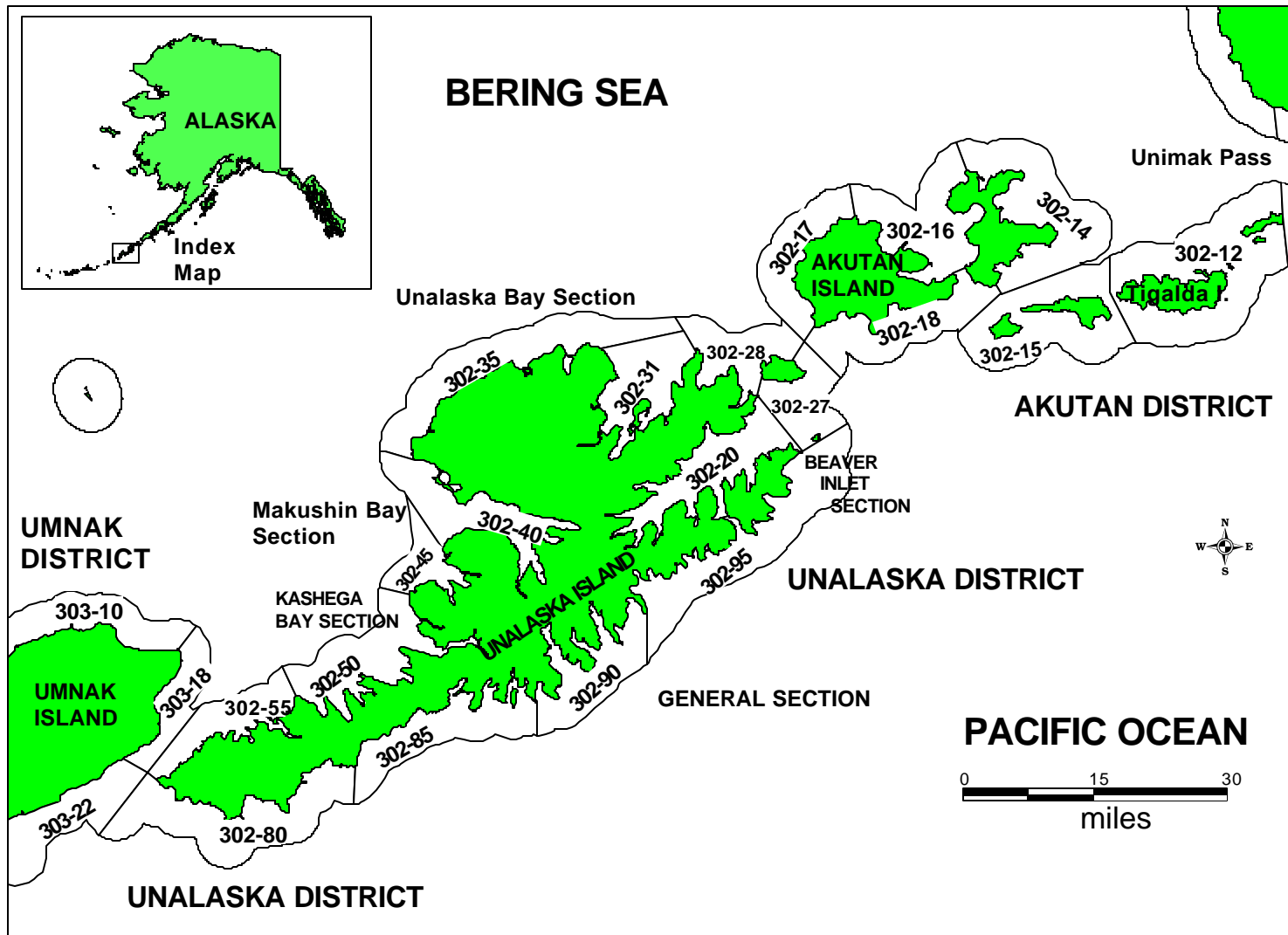


Figure 3. Map of the Aleutian Islands from Tigalda Island to Umnak Island with the statistical herring fishing areas shown.

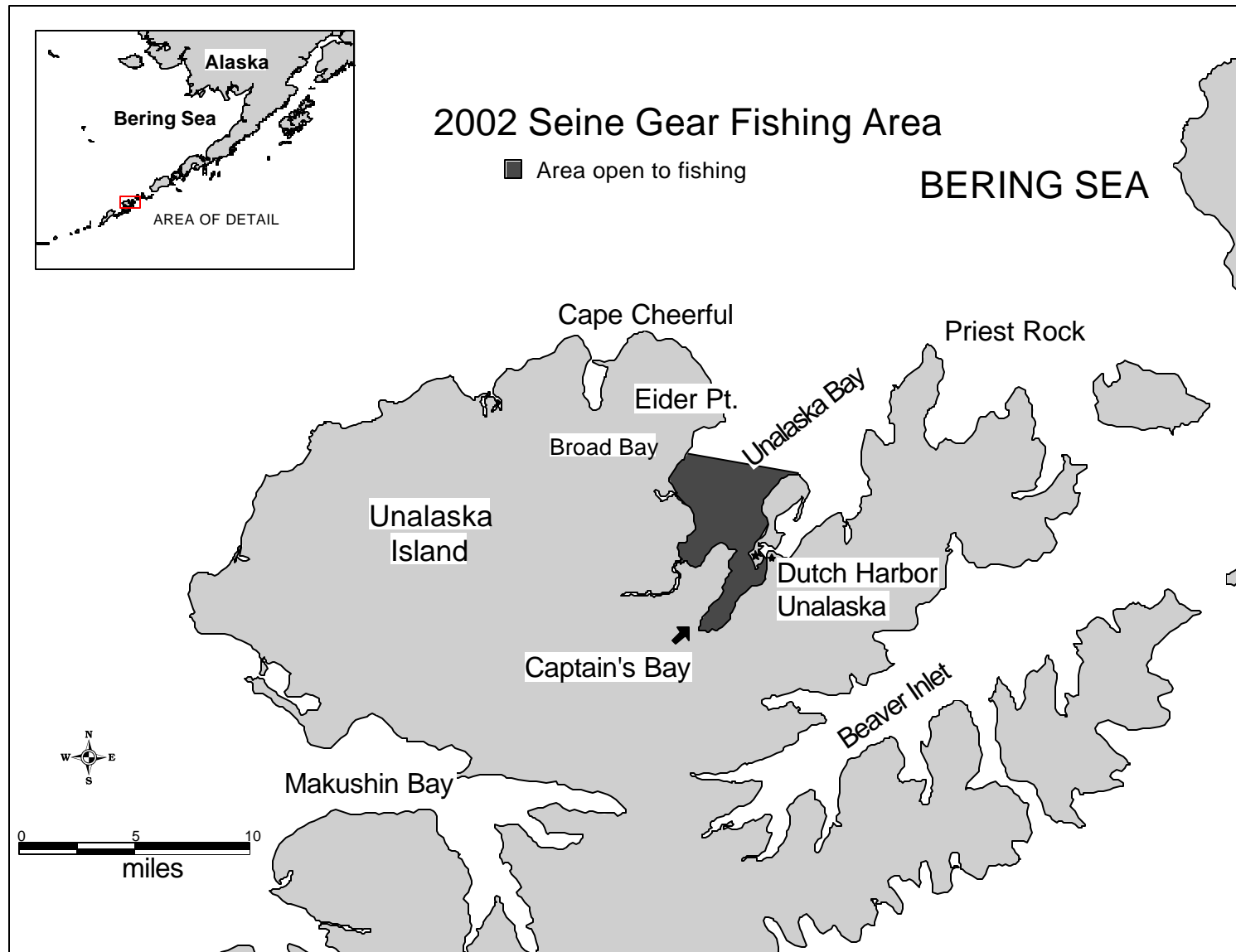


Figure 4. Map of Unalaska Island from Beaver Inlet to Makushin Bay, with the 2002 seine fishery opening defined.

APPENDIX

5 AAC 27.662 BUYER AND TENDER REPORTING REQUIREMENTS.

In addition to the requirements of 5 AAC 39.130(f) each tender operator and each buyer or his agents shall report in person to and register with a local representative of the department upon arrival in the statistical area before commencing operations and before changing location of the operation. Each buyer shall:

- (1) identify all vessels to be employed in transporting or processing herring and shall register such vessels with a local representative of the department located in the statistical area before transporting or processing of herring;
 - (2) make daily reports of all herring purchased from fishermen, and other processing records as specified by local representative of the department; and
 - (3) submit fish tickets before departure from the area and no later than 10 days after termination of buying operations in the area, or as otherwise specified by a local representative of the department.
-

Appendix B. Forecasted harvest allocation for Togiak sac roe and Dutch Harbor food and bait herring fisheries, 2003.

This forecast is for the “Dutch Harbor”: Unimak, Akutan, and Unalaska Districts and that portion of the Umnak District located east of Samalga Pass, food and bait herring fishery (Frederick West, ADF&G, Anchorage, memo December 19, 2002).

***Harvest Allocation of the 2003 Forecasted Pacific
Herring Run Biomass, Togiak District, Bristol Bay***

Biomass (Short Tons)	Harvest (Short Tons)
2003 Forecasted Biomass	126,213
Exploitation @ maximum 20% For Total Allowable Harvest	25,243
Togiak Spawn-on-Kelp Fishery (Fixed Allocation)	1,500
Remaining Allowable Harvest	23,743
Dutch Harbor Food/Bait Allocation^a	
Purse Seine Allocation^b	397
Gill Net Allocation^c	92
Remaining Allowable Harvest for Togiak District Sac Roe Fishery	22,081
Purse Seine Allocation 70.0%	15,457
Gill Net Allocation 30.0%	6,624

^a The Dutch Harbor Food/Bait allocation is 7% of the remaining allowable harvest.

^b The purse seine allocation for 2003 is 93% of the Dutch Harbor allocation minus the 1,149 ton over harvest (rollover) in 2002.

^c The gill net allocation for 2003 is 7% of the Dutch Harbor allocation minus the 24 ton over harvest (rollover) in 2002.

Continued –

2003 Togiak Herring Forecast Summary

Age-structured analysis (ASA) has been used since 1993 to forecast the Togiak herring population. This methodology estimates population abundance using age composition data in conjunction with biomass estimates selected from the best aerial survey years.

The forecasted herring biomass for the Togiak District in 2003 is 126,213 tons. Returns from the 1996, and 1997 year classes (ages-7, and -6, respectively) are expected to dominate with 52% of the biomass and 55% of the abundance in numbers of fish. Age-10 herring from year class 1993 are expected to follow in magnitude with 13% of the biomass and 10% of the abundance. A time series moving average model of 1 was used to forecast the age-4 abundance. The forecasted return of age-4 and -5 herring are uncertain because of the limited sample size of age-4 fish, and the fact that new recruits are not confirmed until they return as age-5 herring. The forecasted average weight of the harvest biomass is 291 g. Average weight should start to increase in the 2004 season when the 1996 year class fully recruits as age-8 herring.

The total allowable harvest on the Togiak herring stock for 2003, as specified in 5 AAC 27.865 (b)(7) is 25,243 tons. Based on the 2002 forecasted Togiak District herring biomass of 120,196 tons, the 2002 Dutch Harbor food and bait fishery allocation was 1,578 tons. The Dutch Harbor fishery resulted in a total harvest of 2,753 tons in 2002. In accordance with the Dutch Harbor food and bait fishery allocation plan (5 AAC 27.655(b)), the amount harvested over the allocation in 2002 (1,173 tons) shall be subtracted from the 2003 allocation of 1,662 tons. This leaves the remaining Dutch Harbor food and bait fishery allocation at 489 tons. In accordance with the Bristol Bay Management Plan (5 AAC 27.865), the 2003 harvest allocation is 1,500 tons to the Togiak District spawn-on-kelp fishery; 489 tons to the Dutch Harbor food and bait fishery; and 22,081 tons to the Togiak District sac roe fishery.

In 2002, inclement weather conditions and poor visibility throughout the herring fishery prevented an accurate aerial assessment of the total run biomass. No aerial surveys were conducted between May 4 and May 10. Therefore, inseason management was based on the preseason forecast of 120,196 tons. Herring were first reported in the district on May 1 by industry representatives. On May 2, staff confirmed the presence of approximately 10,000 tons of herring in areas of the upper Nushagak Peninsula, Kulukak, Ungalikthluk and Togiak Bays. The threshold biomass estimate of 35,000 tons was observed the following day on May 3. The peak biomass estimate of 45,167 tons was observed on May 11. The last survey conducted on June 4 observed an estimated 2,892 tons of herring still on the grounds.

Samples from non-selective gear (commercial purse seine and test purse seine) were used to assess the age composition of the run biomass. Commercial purse seine catch and test fish samples ranged from age-4 to age-18. Age-6 and age-5 herring were the most prevalent and represented 53% of the harvest biomass and 66% of the abundance. Age-9 herring followed with 15% of the biomass and 10% of the abundance.

-Continued-

A change in age composition from older to younger herring was observed in the Nunavachak Section commercial purse seine samples as early as May 5. An early shift to younger herring when only two days had elapsed since the start of the commercial fishery suggests that herring were present on grounds prior to the first observation on May 1. A period of inclement weather precluded department staff surveying the district between April 26 and May 1. This could potentially bias the samples to the younger age classes.

Abundance of the Togiak herring spawning population has been monitored since the late 1970's, concurrent with the development of the sac-roë fishery. Peak abundance was observed during the 1982 and 1983 seasons with recruitment of the large age-5 and age-6 year classes from brood years 1977 and 1978 into the spawning biomass. The 1977 and 1978 year classes dwarfed the magnitude of subsequent year classes. The last modest recruitment events were evident in the 1987 and 1988 year classes. Current data suggests that we are seeing moderately strong recruitment from the 1996 and 1997 year classes and that the Togiak herring population is stable.

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